

REMARKS

Claims 1 - 45 are present in the subject application.

In the Office Action dated May 20, 2004, the Examiner has rejected claims 1 – 45 under 35 U.S.C. §103(a). Favorable reconsideration of the subject application is respectfully requested in view of the following remarks.

The Examiner has rejected claims 1 – 45 under 35 U.S.C. §103(a) as being unpatentable over the McGraw-Hill publication in view of U.S. Patent No. 6,073,148 (Rowe et al.). Briefly, the McGraw-Hill publication discloses a database containing a collection of modular, stand-alone text files that can be mixed, matched and arranged to create a book for a particular course. The Rowe et al. patent discloses a method and apparatus for providing an optimized page-based electronic document file and downloading the optimized file. An optimized document file is created from a non-optimized electronic document. Page contents are contiguously written in the optimized file and a page offset table is provided in the optimized file that includes page offset information used to locate individual pages and objects of the document. Shared objects, such as fonts, are included in the file after the page contents. When downloading the optimized file from a host, the page offset information is read early and is used to download a specific page requested by the user without downloading other pages in the document. A viewer preferably downloads a first portion of the requested page, while all remaining portions of the requested page are located and requested by a finder process using the page offset table. The requested page can thus be downloaded with only one connection to the host. Shared objects can be

downloaded interleaved between portions of the page contents that reference the shared objects. The requested page is displayed to the user on an output display device.

In contrast, the present invention is directed toward a system, method and data structure (e.g., for encoding in a storage device) for storing a content object in a data repository as a group of hierarchically related content entities. Each content entity is contained in a separate file object. A list or outline containing container and non-container identifiers defines the content, order and structure of the content object. This list or outline is stored as a separate file object.

In order to assist in an understanding of the present invention, the present invention features may be illustrated by the following example with respect to generation of a content object in the form of a book. The book structure may include volumes each with one or more chapters, where each chapter, in turn, may include one or more sections. The content of the chapter sections resides in the data repository as individually accessible files each containing a section (or content entity). The present invention system basically represents the book in the form of a hierarchical outline of containers (e.g., representing volumes or chapters) and subordinate non-containers (e.g., sections). The non-containers are each associated with content entity identifiers indicating the files containing the content (or content entities) in the data repository to be included within the corresponding container and book. The hierarchical outline of containers and content entity identifiers is stored as a separate file object. A user interface enables a user to manipulate the outline to select and alter the book content. In other words, a user may construct and arrange the book (e.g., into volumes, chapters, sections, etc.) with content (e.g., text, images, etc.) selected from the data repository. When the user adds, removes or

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moves book content, the corresponding content entity identifier is respectively added, removed or moved within the outline.

The Examiner takes the position with respect to independent claims 1, 8, 16, 23, 31 and 38 that the McGraw-Hill publication discloses all the features within these claims, except for a plurality of content file objects, each containing a content entity, wherein the content entity identifiers each include identification information identifying the content entity associated with that identifier. The Examiner further alleges that the Rowe et al. patent discloses these features and that it would have been obvious to combine the teachings of the McGraw-Hill publication and Rowe et al. patent to attain the claimed invention.

This rejection is respectfully traversed. Initially, independent claims 1, 16 and 31 recite the features of an identifier file object containing a list of content entity identifiers, wherein the arrangement of the content entity identifiers within the list corresponds to a content object or work hierarchical structure including at least one hierarchical tier and at least one subordinate tier. Independent claims 8, 23 and 38 recite the features of an identifier file object containing an outline of containers and content entity identifiers corresponding to a hierarchical structure of the content object or work, wherein each container represents a hierarchical structure tier and includes at least one content entity identifier forming a subordinate hierarchical tier. Independent claims 1, 8, 16, 23, 31 and 38 further recite the features of: a plurality of content file objects, each containing a content entity identified by one of the content entity identifiers, wherein the content entity identifiers each include identification information identifying the content file object containing the content entity associated with that identifier; and the presence

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and position of the content entity identifiers (and containers) being modifiable by a user to alter content and arrangement or structure of the content object or work without manipulating the content entities identified by the content entity identifiers.

The McGraw-Hill publication does not disclose, teach or suggest these features. Rather, the McGraw-Hill publication discloses a database containing a collection of modular, stand-alone text files that can be mixed, matched and arranged to create a new book for a particular course (e.g., See Page 2). A user may select various portions of existing books to add to the new book being created (e.g., See Page 6). The existing books are displayed in a table of contents type format and enable selection of portions for viewing and/or addition to the new book. A user may view the contents of the new book (e.g., See Page 19). The contents are displayed with each selected portion indicated by their title and the title of the book and/or chapter from which they were selected, where a user may arrange or reorder the displayed portions to arrange the new book. The Examiner takes the position that the title and/or chapter displayed for a selected portion are the content entity identifiers arranged in a hierarchical fashion. However, these just indicate the origin of the selected portions (e.g., the chapter and book from which the portion is selected) and do not provide a hierarchical arrangement for the new book. In fact, the selected portions themselves define the content of the new book and are arranged as a list. There is no disclosure of the list including a hierarchical structure including subordinate tiers as recited in the claims. In other words, a user can arrange the selected portion order, but there is no disclosure of the portions being arranged into hierarchical tiers.

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In addition, the McGraw-Hill publication is silent with respect to the manner in which the selected portions are arranged and handled by the system to form the book and, therefore, does not disclose, teach or suggest the features recited in independent claims 1, 8, 16, 23, 31 and 38 of: a plurality of content file objects, each containing a content entity identified by one of the content entity identifiers, wherein the content entity identifiers each include identification information identifying the content file object containing the content entity associated with that identifier; and the presence and position of the content entity identifiers (and containers) being modifiable by a user to alter content and arrangement or structure of the content object or work without manipulating the content entities identified by the content entity identifiers.

The Rowe et al. patent does not compensate for the deficiencies of the McGraw-Hill publication. Rather, the Rowe et al. patent discloses optimizing a document file for efficient download and display. A non-optimized document file includes for each document page text/graphics page contents, unshared image page contents, resource dictionary contents and unshared font object contents. These components are stored in a disjoint manner in a non-optimized fashion within the document file. All of these contents need to be read by the viewer to display the page (e.g., See Fig. 3A; Column 8, line 65 to Column 9, line 13 and Column 9, lines 51 – 60). The Rowe et al. patent is directed toward arranging the file components in an optimal manner for minimizing the time for download and display. In particular, the optimized file is re-organized to include a range table, a first page portion of a cross-reference table, page contents stored contiguously, shared objects, special objects, a cross-reference table and a page offset table (e.g., See Fig. 3B and Column 9, line 61 to Column 10, line 16). In the optimizing

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process, an internal list is created from the non-optimized file to assist in producing the optimized file. Page object identifications are placed in the list in order to retrieve objects from the non-optimized file for placement in the optimized file (e.g., See Fig.3B; Column 11, lines 2 – 7; and Column 12, lines 18 – 21 and 50 – 56). Thus, the internal list is in the form of a listing of identifications and does not include a hierarchical structure including at least one subordinate tier as recited in the claims. Further, the document components are stored in a single file, as opposed to a plurality of file objects each containing a content entity as recited in the claims. Moreover, the internal list of object identifications is generated by the optimization process, where the identifications in the list are not modifiable by a user to alter the content and structure of the document as recited in the claims.

Although the Rowe et al. patent discloses a viewer with a table of contents view (e.g., Fig. 2A) for the document, this view enables users to view various portions of the document. There is no disclosure, teaching or suggestion that the document is modifiable, or for that matter, includes content entity identifiers whose positions are modifiable to alter content and structure of the document as recited in the claims. In fact, the document includes a fixed structure and is for display, where a user may perform various operations on the document including viewing, copying, loading, saving, searching, zooming and selection of a next page within the document (e.g., See Column 8, lines 1 – 13). Since the McGraw-Hill publication and Rowe et al. patent do not disclose, teach or suggest, either alone or in combination, the features recited in independent claims 1, 8, 16, 23, 31 and 38 as discussed above, these claims are considered to be in condition for allowance.

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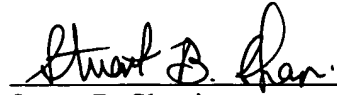
Claims 2 – 7, 9 – 15, 17 - 22, 24 – 30, 32 – 37 and 39 - 45 depend either directly or indirectly from independent claims 1, 16, 23, 31 or 38 and, therefore, include all the limitations of their parent claims. These claims are considered to be in condition for allowance for substantially the same reasons discussed above in relation to their parent claims and for further limitations recited in the claims.

In addition to the foregoing, it would not be obvious to combine the McGraw-Hill publication and the Rowe et al. patent to attain the claimed invention. Specifically, the McGraw-Hill publication is directed towards a database containing a collection of modular, stand-alone text files that can be mixed, matched and arranged to create a book for a particular course as described above. On the other hand, the Rowe et al. patent is directed toward a method and apparatus for providing an optimized page-based electronic document file and downloading the optimized file as described above. In other words, the Rowe et al. patent pertains to arranging document components within a file in an optimal manner for downloading and display, and is not concerned with construction and modification of a book. Accordingly, the patents are directed toward diverging applications and there is no reason, suggestion or motivation to combine their teachings. Thus, the proposed combination of the McGraw-Hill publication and Rowe et al. patent does not render the claimed invention obvious.

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The application, having been shown to overcome issues raised in the Office Action, is considered to be in condition for allowance and Notice of Allowance is earnestly solicited.

Respectfully submitted,



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